PYOGENIC GRANULOMA : A CASE SERIES

Nitin Upadhyay†, Sunil.R.Panat††, Nupur Agarwal† ††, Abhijeet Alok† † † † †, Anuja Joshi† † † † † † †

† Senior Lecturer, Department of Oral Medicine and Radiology, Institute Of Dental Sciences, Bareilly (U.P).
†† Professor and Head, Department of Oral Medicine and Radiology, Institute Of Dental Sciences, Bareilly (U.P).
† † † Senior Lecturer, Department of Oral Medicine and Radiology, Institute Of Dental Sciences, Bareilly (U.P).
† † † † P. G. Student, Department of Oral Medicine and Radiology, Institute Of Dental Sciences, Bareilly (U.P).
† † † † † P. G. Student, Department of Oral Medicine and Radiology, Institute Of Dental Sciences, Bareilly (U.P).

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ABSTRACT: Pyogenic granuloma (PG) is a relatively common benign vascular lesion of the skin and mucosa. The exact cause is not known but multiple factors have been implicated in the etiology of pyogenic granuloma. It predominantly occurs in second decade of life in young females, possible because of the vascular effects of female hormones. The pyogenic granuloma typically evolves rapidly over a period of few weeks. It can mimic a number of malignant tumors making the histopathological examination of lesion necessary. It predominantly occurs in second decade of life in young females, possible because of the vascular effects of female hormones. Clinically oral pyogenic granuloma is a smooth or lobulated exophytic lesion pedunculated or sometimes sessile base, which is usually hemorrhagic. Hereby we are reporting three case reports of pyogenic granuloma at different age groups, sex and site.

KEY WORDS: Pyogenic granuloma, Maxilla, Recurrence, Pregnancy Tumor, Histopathological.

INTRODUCTION

Pyogenic granuloma (PG) is a benign localized exuberant mass composed of proliferating capillaries in loose stroma produced after injury or local infection. 1 Pyogenic granuloma which often arises in 2nd or 3rd trimester is termed as “Pregnancy Tumor”. It is well-circumscribed elevated, pedunculated or sessile lesion, which may be covered with necrotic white plaque which clinically resembles pus, hence early clinicians have suggested the name 'Pyogenic Granuloma'. It is well-circumscribed elevated, pedunculated or sessile lesion, which may be covered with necrotic white plaque which clinically resembles pus, hence early clinicians have suggested the name 'Pyogenic Granuloma'. PG has no malignant potential but recurrence is quite common after excision. 2

CASE REPORT :- 1

A 10 year old male patient reported to Department of Oral Medicine and Radiology, Institute of Dental Sciences, with a chief complaint of swelling on right upper front tooth region since 1-2 months (Fig 1). History of present illness revealed that initially the swelling was of small size but increased to present size. Pain was present in that region and history of constant bleeding while brushing and eating hard foods. Intra oral examination revealed a growth of roughly .5 X 1 cm in size, roughly oval in shape is present on upper front tooth region present interdentally between 11 and 12. Overlying surface appears lobulated, pinkish in colour. On palpation all inspector findings were confirmed. It was sessile, soft, bleeds on touch and tender on palpation. On hard tissue examination stains and calculus were present. No missing and decayed tooth was present. Based on the clinical examination and history, provisional diagnosis of pyogenic granuloma was given with differential diagnosis of irritational fibroma and peripheral giant cell granuloma. Radiographic examination revealed no bony changes. The lesion was surgically excised and sent for histopathological examination which revealed epithelium is stratified squamous parakeratinized type. Connective tissue stroma was present consisting of loose, dense fibrillar connective tissue. Endothelial cell proliferation was present with abundant fibroblasts and area of haemorrhage suggestive of pyogenic granuloma (Fig 4). So the final diagnosis of pyogenic granuloma was given.

CASE REPORT :- 2

A 25 year female patient reported to to Department of Oral Medicine and Radiology, Institute of Dental Sciences, with a chief complaint of swelling on right upper front tooth region since 3 months (Fig 2). History of present illness revealed that initially the swelling was smaller in size but it increased to the present size over a period of time. History of blood discharge from that lesion was present while eating, brushing or by touching. On intra oral examination a well defined oval swelling roughly oval in shape, roughly 1X 2 cm in diameter extending from distal surface of 14 to mesial surface of 15. Overlying surface appears smooth, pink in colour in anterior part and erythematous area on posterior surface. On palpation all inspector findings are confirmed. It is sessile, bleeds on touch, non tender. On hard tissue examination all teeth were present. Stains and calculus was present. Based on the clinical examination and history, provisional diagnosis of pyogenic granuloma was given with differential diagnosis of irritational fibroma and peripheral giant cell granuloma. Radiographic examination revealed no...
bony changes. The lesion was surgically excised and sent for histopathological examination which revealed epithelium is stratified squamous parakeratinized type. Connective tissue stroma was present consisting of loose, dense fibrillar connective tissue. Endothelial cell proliferation was present with abundant fibroblasts and area of haemorrhage suggestive of pyogenic granuloma. So the final diagnosis of pyogenic granuloma was given.

CASE REPORT : 3

A 19 year old male patient reported to Department of Oral Medicine and Radiology, Institute of Dental Sciences, with a chief complaint of swelling on right upper front tooth region since 3 months (Fig 3). History of present illness revealed that initially the swelling was of small size but increased to present size. Pain was present in that region and history of constant bleeding while brushing. Intra oral examination revealed a solitary growth of roughly 1 X 2 cm in size, roughly oval in shape is present on upper front tooth region present from mesial surface of 12 to distal surface of 13. Overlying surface appears lobulated, pinkish in colour. On palpation all inspector findings were confirmed. It was sessile, soft, bleeds on touch and tender on palpation. On hard tissue examination stains and calculus were present. No missing and decayed tooth was present. Based on the clinical examination and history, a provisional diagnosis of pyogenic granuloma was given with differential diagnosis of irritational fibroma and peripheral giant cell granuloma. Radiographic examination revealed no bony changes. The lesion was surgically excised and sent for histopathological examination which revealed epithelium is stratified squamous parakeratinized type. Connective tissue stroma was present consisting of loose, dense fibrillar connective tissue. Endothelial cell proliferation was present with abundant fibroblasts and area of haemorrhage suggestive of pyogenic granuloma. So the final diagnosis of pyogenic granuloma was given.

DISCUSSION

The term “Pyogenic Granuloma” is a misnamed entity. It is neither infectious nor granulomatous. The lesion is common on gingiva, followed by lips, tongue & buccal mucosa. Surface is smooth lobulated, ulcerated & shows tendency for bleeding. Consistency is soft. It is seen quite often in children and young adults but is unusual in elderly. Although exact pathogenesis is not known. It was believed to be a botryomycotic infection but later suggested that it is caused by infection of streptococci & staphylococci. But now it is believed that low grade trauma or irritation, hormonal influences, viral oncogens, or certain kinds of drugs are the causative factors. Approximately one-third of the lesion occurs after trauma. Poor oral hygiene may be precipitating factor in many of these patients. The usual size of pyogenic granuloma is less than 2cm, but there are reports of giant pyogenic granulomas in immunocompromised patients. Young pyogenic granulomas are highly vascular in appearance because they are composed predominantly of hyperplastic granulation tissue in which capillaries are prominent whereas older lesions tends to become more collagenized & pink.

Pyogenic granuloma develops in up to 5% of pregnancies hence the term “pregnancy tumor” and “granuloma gravidarum” are often used. Differential diagnosis includes peripheral giant cell granuloma, peripheral ossifying fibroma, metastatic cancer, haemangioma, hyperplastic gingival inflammation, Kaposi sarcoma, bacillary angiomatosis. Radiographically, there is no findings. In long standing cases bone destruction can be seen but it is very rare.

Although many treatment have been proposed but surgical excision is the best treatment modality with excision extending down to peristeum and the adjacent teeth should be thoroughly scaled to remove the source of continuing irritation. After excision, recurrences occur in up to 16% of cases, so in some cases re excision is necessary. Recurrences is believed to occur from incomplete excision and failure to remove the etiological factors.

CONCLUSION

Although pyogenic granuloma is a non-specific growth in the oral cavity, proper diagnosis, prevention, management & treatment of the lesion are very important. Pyogenic granuloma arises in response to various stimuli such as low grade local irritation, sex hormones, traumatic injury or certain kind of drugs. Excisional surgery is the treatment of choice.

REFERENCES


Corresponding Address:
Dr. Abhijeet Alok
Email: drabhijeet786@gmail.com
LIST OF PHOTOGRAPHS

Fig 1: Case 1

Fig 2: Case 2

Fig 3: Case 3

Fig 4: Histopathological Picture